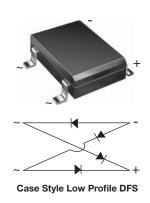
### DFL15005S, DFL1501S, DFL1502S, DFL1504S, DFL1506S, DFL1508S, DFL1510S

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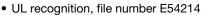
# Low Profile Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers



PRIMARY CHARACTERISTICS							
Package	Low profile DFS						
I <sub>F(AV)</sub>	1.5 A						
$V_{RRM}$	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I <sub>FSM</sub>	50 A						
I <sub>R</sub>	5 μΑ						
V <sub>F</sub> at I <sub>F</sub> = 1.5 A	1.1 V						
T <sub>J</sub> max.	150 °C						
Diode variations	Quad						

### **FEATURES**





• Ideal for automated placement

• High surge current capability

Meets MSL level 1, per J-STD-020, LF maximum COMPLIANT peak of 260 °C

 Material categorization: For definitions of compliance please see <a href="https://www.vishav.com/doc?99912">www.vishav.com/doc?99912</a>

### TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

#### **MECHANICAL DATA**

Case: Low profile DFS

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: As marked on body

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at T <sub>A</sub> = 40 °C	I <sub>F(AV)</sub> (1)	1.5						А	
Peak forward surge current single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50						А	
Rating for fusing (t < 8.3 ms)	l <sup>2</sup> t	10						A <sup>2</sup> s	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150						°C	

### Note

<sup>(1)</sup> Units mounted on PCB with 0.51" x 0.51" (13 mm x 13 mm) copper pads

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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	UNIT
Max. instantaneous forward voltage drop per diode	1.5 A	V <sub>F</sub>	1.1					V		
Maximum DC reverse current at rated DC blocking	T <sub>A</sub> = 25 °C	5.0								
voltage per diode	T <sub>A</sub> = 125 °C	I <sub>R</sub> 500						μA		
Typical junction capacitance per diode		C <sub>J</sub> <sup>(1)</sup>	16					pF		

#### Note

<sup>(1)</sup> Measured at 1.0 MHz and applied reverse voltage of 4.0 V

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	DFL 15005S	DFL 1501S	DFL 1502S	DFL 1504S	DFL 1506S	DFL 1508S	DFL 1510S	UNIT
Typical thermal resistance	R <sub>0JA</sub> (1)	40							°C/W
Typical thermal resistance	R <sub>0</sub> JL (1)				15				C/VV

#### Note

<sup>(1)</sup> Units mounted on PCB with 0.51" x 0.51" (13 mm x 13 mm) copper pads

ORDERING INFORMATION (Example)									
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
DFL1506S-E3/45	0.341	45	50	Tube					
DFL1506S-E3/77	0.341	77	1500	13" diameter paper tape and reel					

### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

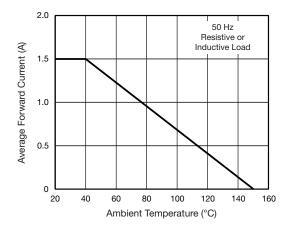


Fig. 1 - Forward Current Derating Curve Per Diode

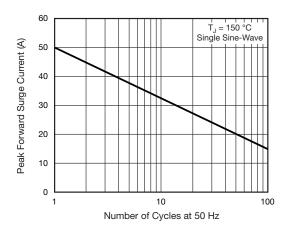


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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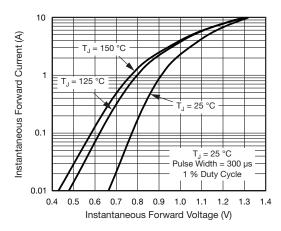


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

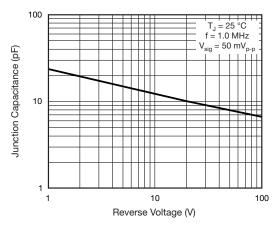


Fig. 5 - Typical Junction Capacitance Per Diode

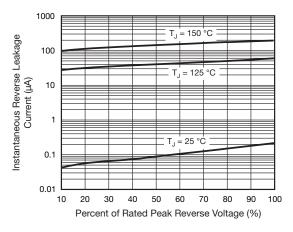
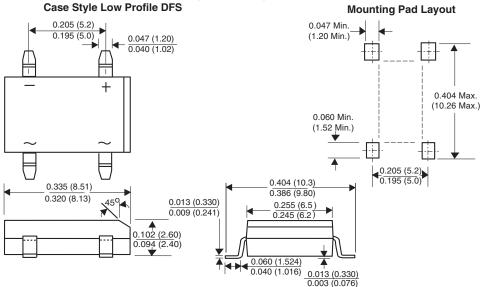


Fig. 4 - Typical Reverse Characteristics Per Diode

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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